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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,808	10/11/2005	Bernhard Gleich	DE 030124	5527
24737	7590	01/05/2011	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			GUPTA, VANI	
P.O. BOX 3001			ART UNIT	PAPER NUMBER
BRIARCLIFF MANOR, NY 10510			3777	
MAIL DATE	DELIVERY MODE			
01/05/2011	PAPER			

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The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/552,808

Filing Date: October 11, 2005

Appellant(s): GLEICH, BERNHARD

William S. Francos
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 7, 2010 appealing from the Office action mailed March 24, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1 – 14 are pending in this application and are rejected as indicated in the office action mailed on March 24, 2010.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN"

REJECTIONS.” New grounds of rejection (if any) are provided under the subheading “NEW GROUNDS OF REJECTION.”

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant’s brief.

(8) Evidence Relied Upon

6,470,220	Kraus, Jr. et al.	10-2002
6,940,286	Wang et al.	9-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus, JR. et al. (US 6,470, 220 B1) in view of Wang et al. (US 6,940,286 B2).

Regarding Claim 1, Kraus, JR. et al. (hereinafter Kraus) discloses a device for examination and use of an electrical field in a magnetic gradient field, containing magnetic particles in an examination area of an object under examination, comprising

a) at least one first arrangement for determining the spatial distribution of magnetic particles in at least one examination area of the examination object, comprising a means for generating a magnetic field with such a spatial profile of the magnetic field strength that a first sub-zone with low magnetic field strength and a second sub-zone with a higher magnetic field strength are produced in at least one examination area, a means for detecting signals (“SQUID,” col. 7, ll. 60 – 67) which depend on the magnetization in the examination object, especially in the examination area, influenced by a local change in the particles, together with a means for evaluating the signals to obtain information about the, especially time-variable, spatial distribution of the magnetic particles in the examination area (col. 13, ll. 9 – col. 14, line 36).

However, Kraus does not suggest the second arrangement of Claim 1.

Nonetheless, Wang et al. teaches at least one second arrangement, comprising at least one electrical transmits and/or receive unit, comprising:

at least one voltage generator (“*electrically conductive ring*” surrounding object of interest); and

at least one terminal contact (“electrical contacts,” (2); col. 5, line 7) connected to the voltage generator (col. 5, ll. 3 – 7 and 17 – 19) and applicable and/or fastenable to an object (3) under examination (**fig. 1**; Abstract; col. 4, ll. 60 – 65).

With respect to a ground terminal: it would be have been obvious matter of design choice, as it would have been well known to one of ordinary skill in the art, to include a ground terminal for safety reasons so as to not electrocute a patient during examination.

It would have been *prima facie* obvious to modify Kraus to with Wang et al. to obtain additional information such electrical impedance distribution (col. 2, ll. 38 - 50) to complement the spatial distribution of magnetic particles studies performed by Kraus.

Regarding Claim 2, Wang et al. discloses that the device comprises at least one pair of contact electrodes, especially a plurality of pairs of contact electrodes, for recording potential differences (Abstract; and col. 5, ll. 1 – 55).

Regarding Claim 3, Wang et al. teaches that the device is characterized by at least one voltage measuring unit and/or current measuring unit (see rejection of claims 1 and 2).

Regarding Claim 4, Wang et al. teaches that the device is characterized in that the voltage generator, the voltage measuring unit and/or the current measuring unit may be brought into or are in active connection with a microprocessor or computer (**fig. 20**).

Regarding Claim 5, Wang et al. teaches that the second arrangement is characterized in that the voltage measuring unit and/or the current measuring unit is/are equipped with at least one analog filter, measuring amplifier, A/D converter and/or digital filter (col. 4, ll. 24 – 27).

Regarding Claim 6, Wang et al. teaches applying voltage to a region of interest (col. 5, ll. 17 – 19). Nonetheless, as it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate a voltage with the range of 10 V and 200 V, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only skill in the art. See *In re Aller*, 105 USPQ 233.

Regarding Claim 7, Kraus discloses that device is characterized by at least one frequency converter (col. 9, line 41 – **Equation 1**).

Regarding Claims 8, 9, and 12 – 14, Kraus discloses relevant characterizations (see rejection of Claim 1; col. 9, line 23 - col. 10, line 64; col. 13, 11. 16 - 18; and col. 14, 11. 9 – 15).

Regarding Claim 10, Kraus discloses that at least one coil arrangement, for changing the spatial position of the two sub-zones in the examination area, such that the magnetization of the particles varies locally (col. 13, ll. 9 – 14).

Regarding Claim 11, Kraus discloses that a coil arrangement, for changing the spatial position of the two sub-zones in the examination area by means of superimposition of an oscillating or rotating magnetic field, especially in the first sub-zone with low field strength (rejection of claim 1; col. 3, ll. 9 – 14 and 52 - 60; col. 9, ll. 65 - 67; and col. 11, line 58 - col. 12, line 5).

(10) Response to Argument

Applicant argues that proper rejection for obviousness has not been established in that Wang et al. does not disclose a transmit and/or receive unit **comprising a voltage source**, as specifically recited in claim 1; i.e., the number of "electrical excitations sources, such as current or voltage...applied to one or more electrical contacts" of Wang are not part of a transmit and/or receive unit as specifically recited in Claim 1.

Examiner respectfully disagrees, and points out that the transmit and/or receive unit structure of Wang et al. itself is the excitations source that applies voltage or current to one or more electrical contacts (2) connected to the unit. That is, the excitations source is the ring of the transmit/receive unit of Wang (Figure 1). The contacts (2) are connected to, or surround, the ring

Furthermore, Applicant has not claimed any actual function that the transmit/receive unit must perform that would make it patentably distinct over the prior art. The claim as it is written, claims that there is some “kind” of unit that comprises a voltage source or generator (the ring indicated in Figure 1), at least one terminal contact connected to the voltage generator and applicable and/or fastenable to an object under examination (col. 5, ll. 5 – 24). If there is something unique to the structure and function of the transmit and/or receive unit of the present invention such that it would make novel over the prior art, or that its arrangement of components would produce new and unexpected results, Applicant has neither expressly claimed it nor explained it.

Applicant also argues that assertion that the featured ground terminal as a matter of design choice for safety purposes to prevent the electrocution of the patient during examination is flawed.

Examiner respectfully disagrees. First of all, the claim language does not specify that the ground terminal must be connected to the object of interest, but rather that it is **applicable and/or** fastenable to the object. Therefore, the claim language is broad enough to encompass either the connection of the ground terminal to the patient **or** the **application** of the ground terminal within the **vicinity** of the patient. In that sense, it is still within the skill of one in the art to provide a ground terminal in conjunction with the transmit/receive unit for the safety of the patient.

Furthermore, Examiner disagrees that a ground terminal would not be used for the patient's safety; and that it is not within the ordinary skill of art to use a ground terminal for such a purpose. As indicated in the previous office action, the dictionary definition provided (Merriam-Webster Dictionary Online) indicates that a ground is “a large conducting body used

as a common return for an electric circuit and as an arbitrary zero of potential.” Additionally, as it is known in the art, a ground terminal provides resistance to control current. As is known by one of ordinary skill in that art, anytime an object is connected to another object that generates some current or voltage, there must be a common return for an electric circuit and as an arbitrary zero of potential, so that there is provided some resistance to control current. Otherwise, the object, such as patient, becomes part of the circuit, allowing current to run through the patient. Therefore, it is within the skill and knowledge of one in ordinary art to “apply” or “fasten” a ground terminal within the vicinity of a patient for the patient’s safety.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Vani Gupta/

Examiner, Art Unit 3777

Conferees:

/Tse Chen/

Supervisory Patent Examiner, Art Unit 3777

/Thomas J Sweet/

Supervisory Patent Examiner, Art Unit 3779

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